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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/794,637	02/03/1997	JOHN S. HENDRICKS	5033	6885

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EXAMINER	
GRANT, CHRISTOPHER C	
ART UNIT	**PAPER NUMBER**
2611	16

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/794,637	Applicant(s) SHEPHARD, PHILIP CHARLES	
	Examiner Christopher Grant	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-25 and 28-158* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7 and 53-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *13* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-2, 4-7 and 53-60 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The current invention is to allocate bandwidth to programs and/or categories using an algorithm, wherein the algorithm is based on buy rates, margin of profit, length of program and any contractual requirements. See the specification at page 71, lines 1-4.

The specification fails to enable one skilled in the art to make and/or use "***selecting specific programs received from television programming sources, wherein the step of selecting uses an algorithm to select specific programs based on each programs' bandwidth requirement***" as recited in claim 1, lines 3-5 and similarly in claim 53, line 3.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yurt and Hang (both of record).

Considering claim 1, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponding to one of a plurality of categories, the method comprising:

a) selecting programs received from television programming sources (see the entire reference including but not limited to col. 18, lines 58-64 and col. 6, lines 1-37); and

b) allocating bandwidth (col. 17, line 59 - col. 18, line 3). Note that every program corresponds to a category. For example, the movie "Colombo" corresponds to the mystery category and movie "The French connection" corresponds to the drama category.

However, Yurt fails to specifically disclose using an algorithm to select specific programs based on each program's bandwidth requirement and continuing the allocating step until all the programs are allocated or all of the bandwidth is allocated as recited in the claim.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs' bandwidth requirement and continuing the allocating step until all the programs are allocated or all the bandwidth is allocated. See figure 1 and col. 3, line 10 - col. 4, line 65 and col. 9, line 62 - col. 10, line 3.

It would have been obvious to one of ordinary skill in the art to modify Yurt's system to include selecting or allocating programs based on each programs' bandwidth requirement and

allocating bandwidth to the programs until all the programs are allocated or all the bandwidth is allocated, as taught by Hang, for the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement for efficient program transmission to subscribers.

Claim 2 is met by the combined systems of Yurt and Hang, since bandwidth are dynamically allocated based on each programs' bandwidth over time.

As for claims 4, 6 and 7, the combined systems of Yurt and Hang, fail to specifically disclose selecting programs based on buy rates, programs watched information and marketing information as recited in the claims.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on buy rates, programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers. For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewer-ship. Broadcasters use Nielsen type rating systems to determine which programs to broadcast to subscribers and advertising rates.

It would have been obvious to one of ordinary skill in the art to modify the combined systems of Yurt and Hang (if necessary) to include selecting programs based on buy rates, programs watched information and marketing information, because these are typical subscriber

actions that are surveyed by marketing companies to determine which programs to broadcast and the rates for commercials (statistical analysis).

As for claim 5, the combined systems of Yurt and Hang, fail to specifically disclose selecting programs based on program length as recited in the claim.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for broadcast based on the length of the programs for the advantage of scheduling similar time slot programs together. It is well known in the art to schedule 1/2 hour programs together and to start 1 hour programs on the hour. For example note the following television schedule or program lineup:

a) 10:00pm Network magazine (1 hour);

b) 11:00pm News (1/2 hour);

c) 11:30pm The Tonight Show (1 hour).

It would have been obvious to one of ordinary skill in the art to modify the combined systems of Yurt and Hang (if necessary) to include selecting programs based on the program length, because it is a typical broadcasting technique used for scheduling programs into specific time slots.

Allowable Subject Matter

4. Claims 8-25, 28-52 and 61-158 avoid the prior art because the prior art fails to disclose or suggest a method of allocating bandwidth to a plurality of programs, each programs corresponding to a plurality of categories, the method comprising the steps of prioritizing each of the programs, dividing the bandwidth, allocating and continuing the allocating step; or a method of transmitting a plurality of programs to a cable headend comprising the steps of prioritizing each of the programs, forming, appending a header, dividing bandwidth, allocating and continuing allocating; or a method of transmitting programs to a plurality of transponders comprising the steps of prioritizing each of the programs, forming, allocating, continuing allocating and transmitting; or a method of transmitting a plurality of programs to first and second cable headends comprising the steps of prioritizing each of the programs, allocating a first amount of bandwidth, continuing the first bandwidth allocation, allocating a second amount of bandwidth, continuing the second bandwidth allocation, transmitting programs in the first and second amount of bandwidth to the first and second cable headend; or a computer assisted packaging system for generating program control information, packaging programs and for allocating bandwidth to a plurality of programs, comprising a multiplexer for allocating bandwidth, a delivery control processor for receiving commands from a central processing unit; or a computer assisted packaging system for allocating bandwidth to a plurality of programs, each program corresponding to a plurality of categories, comprising a multiplexer for allocating bandwidth, a

delivery control processor unit for selecting programs and central processing unit **as recited in the claims.**

Response to Arguments

5. Applicant's response filed 1/13/2003 have been fully considered.

Response to applicant's arguments

a) Applicant argues that "***Therefore, the specification describes in these passages that the CAP software gathers and "properly assigns" programs (i.e. selects programs) by priority level (i.e. bandwidth requirement)***" on page 2, lines 24-26 of the amendment filed 1/13/2003.

In response, the Examiner totally disagrees. A more precise term is "***properly assign programs to transponders by priority level***" (page 78, lines 9-10 of the specification). Therefore, the term "properly assigns" is more related to the allocating step than the selecting step.

The priority levels one, two and three are used to divide the program control information to accommodate cable TV systems that have different bandwidths and channel capacities (specification at page 75, lines 16-24). Therefore, the priority levels one, two and three are more related to a ranking or relevance scheme with cable TV systems.

b) Applicant argues that "***By doing such, the software "packages the programs efficiently for the available bandwidth"*** on page 2, lines 26-27 of the amendment filed 1/13/2003.

In response, the Examiner totally disagrees. The exact sentence is "***The software also packages the programs efficiently for the available bandwidth and for subscriber viewing through computer assisted creation of program line-up*** **and allocating of bandwidth** (specification at page 8, lines 15-18). The Examiner contends that this procedure is related to the allocating step and not the selecting step.

c) Applicant argues that "***Efficiently packaging the programs for available bandwidth inherently must be based on bandwidth requirements of each program***" on page 2, lines 27-28 of the specification.

In response, the Examiner posits that the packaging step discussed above is in relation to the allocating step as oppose to the selecting step.

d) Applicant argues that "***Therefore, since the specification states that the selecting step may be performed by the CAP software, the specification clearly enables the step of selecting specific programs using an algorithm to select specific programs based on each program's bandwidth requirement***" on page 2, lines 28-31 of the amendment.

In response, the Examiner totally disagrees. First, the specification does not state that the selecting step may be performed by the CAP software. Secondly, the specification **does not clearly** teach, suggest or even enable the step of selecting specific programs **using an algorithm** to **select specific programs based on each program's bandwidth requirement**.

e) Applicant argues that "***...the specification explicitly describes a component (the combiner) of the cable headend selecting programs to create customized priority levels (i.e. signals of certain bandwidth)***" on page 3, lines 9-11 of the amendment.

In response, the Examiner totally disagrees. First, there is nothing in the specification that explicitly describes the step of "***selecting specific programs received from television programming sources, wherein the step of selecting uses an algorithm to select specific programs based on each programs' bandwidth requirement***" as required by the claims.

Secondly, priority levels are related to the ranking scheme assigned to cable TV systems that have different bandwidth capabilities as illustrated in figures 16-17 and described at pages 75-78 of the specification. Even in this scenario, bandwidth is related to the allocating step and not the selecting step.

Thirdly, Applicant has failed to find support or identify the "algorithm" as required by the claims.

For all the reasons given above, the Examiner concludes that claims 1-2, 4-7 and 53-60 are non-enabling.

f) Applicant argues that "***However, a thorough examination of Hang reveals that it does not disclose the claim 1 step of selecting specific programs received from television programming sources, wherein the step of selecting uses an algorithm to select specific programs based on each program's bandwidth requirement***" at page 3, lines 21-24 of the amendment.

In response, the Examiner totally disagrees with Applicant. First, columns 9-10 of Hang describe that the allocation scheme could be employed if each video coder was processing image streams derived from **separate video sources**. Signals including images from separate video sources are programs. Secondly, the Examiner pointed out that Yurt discloses selecting programs received from television programming sources throughout the entire reference including but not limited to col. 18, lines 58-64 and col. 6, lines 1-37. Thirdly, Applicant is arguing against the references individually. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

For all the reasons given above, the Examiner concludes that rejection of claims 1-2 and 4-7 over the combined systems of Yurt and Hang is proper.

g) Applicant traverses the Official Notice take on page 5 of the previous Office Action and states that "**It is immaterial that broadcasters have based programming decisions and advertising rates on Nielsen ratings**". on page 4 (second paragraph) of the amendment filed 1/13/2003.

In response, the Examiner provided full explanation for all Official Notice taken in the previous Office Action at pages 5-6. In addition, the Examiner has now cited the following references to support the Official Notice taken:

(g1) McMullan discloses a system for collecting viewing statistics with buy rates analysis. See abstract and col. 35, lines 29-49.

(g2) Haave et al. disclose a system that selects programs based on buy rates at col. 3, line 63 - col. 4, line 11 and column 12, lines 15-26.

(g3) Haave et al. disclose a system that selects programs based program length at col. 11, lines 21 - 29.

(g4) Nall discloses a system that selects programs based program length. See col. 4, lines 34 - 56.

(g5) Hertz et al disclose a system that selects programs based program length at col. 6, lines 6 - 26.

(g6) Herz et al. disclose a system that selects programs based on programs watched. See the abstract and columns 1-4.

(g7) Weinblatt (columns 1-2) and Adams (columns 1-2) disclose a system that monitors viewing habits (programs watched) to generate statistical analysis for broadcasters. The broadcasters eventually select the most popular programs for broadcasting based on this analysis (i.e. programs watched).

Moreover, Applicant acknowledges that **broadcasters have based programming decisions and advertising rates on Nielsen ratings**". The Nielsen system (established well before 1970) clearly monitors viewing habits including examining the programs that viewers watch. It is a fact that a broadcaster selects programs that are widely watched. For example,

"Mash" is a program that a broadcaster selects because it is a popular program for viewers. Therefore, the Nielsen rating system **is material** to at least Applicant's claim 6.

For all the reasons given above, the Examiner concludes that rejection of claims 4-7 is proper.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Grant whose telephone number is (703) 305-4755. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4380.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306 0377.

Christopher Grant
Primary Examiner
April 4, 2003